

R 0.500" x .058" w

78806

Page 1

N900040100

Setup Start ***NS1***

Stop ***NS2***

500

Cust Item ID:

500

Customer:

Run Start *NR1*

Tooling:

Date:

Stop *NR2*

Date:

SPC (Y/N):

Date:

**Insp.
Stamp**

Revision Nbr

D4202

B C M

0.00

100

Hardinge CNC LATHE SMALL

Hardinge

Memo

0.00

Hardinge CNC Lathe Small

1- Machine as per Folio FB015

FOLIO REV:

DWG REV:

2- Deburr

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

Memo

0.00

QC

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 78806

78806

Page 2

January-16-12 9:04:08 AM

Item ID: D4202-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Spacer
 Start Date: 16/01/2012 Start Qty: 500.00 ***500*** Cust Item ID:
 Required Date: 30/01/2012 Req'd Qty: 500.00 ***500*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									
130	Outsource process - Heat Treat	0.00							
130									
Outsource1	Memo	0.00							
Outsource process - Heat Treat	***HEAT TREAT AS PER DWG D4202***								
140	Receive & Inspect for Damage & Mat'l Certs	0.00							
140									
Packaging	Memo	0.00							
Packaging									

B.A 12/01/24

514

CX 12/01/26 514

210.15999

6.12/28 (514)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 78806

78806

Page 3

January-16-12 9:04:08 AM

Item ID: D4202-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Spacer
 Start Date: 16/01/2012 Start Qty: 500.00 *500* Cust Item ID:
 Required Date: 30/01/2012 Req'd Qty: 500.00 *500* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150	QC6- Inspect dimensions to drawing	0.00							
150									
QC	Memo	0.00							
Quality Control									

190	Identify as per dwg & Stock Location: SLG	0.00							
190									
Packaging	Memo	0.00							
Packaging	***STOCK IN SKIDTUBE CELL***								

200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	0.00							
Quality Control									

12/2/13
 12-01-24
 514

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-16-12 9:04:12 AM

Page 1

Work Order ID: 78806

78806

Parent Item: D4202-1

D4202-1

Parent Item Name: Spacer

Start Date: 16/01/2012

Required Date: 30/01/2012

Start Qty: 500.00

Required Qty: 500.00

Comments: IPP REV:A NEW ISSUE 10-12-07 JLM VERIFIED:DD IPP
REV:B AS PER REV B 11-04-05 JLM VERIFIED BY:DD IPP Rev:C
11.12.19 PER DWG REV.C DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6T0.500W.058

Purchased

No

100

f

229.2560

0.35

184.2105

M6061T6T0 500W 058

**

12-01-23

6061-T6 RD Tube .500 x.058W

Location

Loc Qty

Loc Code

MAT014

229.256

117084

23.242

117890

0.1

119160

1.914

120183

204

204

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

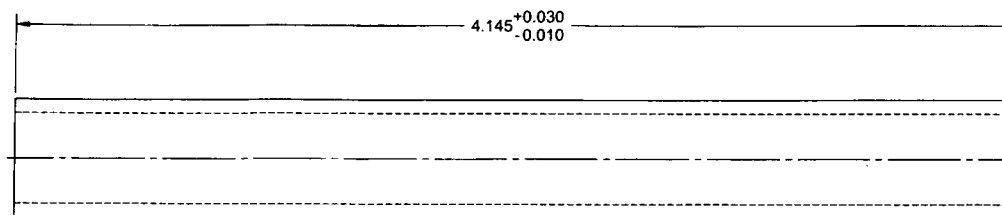
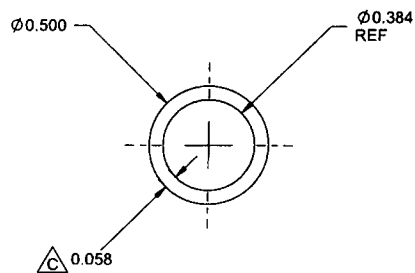
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4202-1 SPACER

UNCLASSIFIED

SECRET

NO. 78806 M.L.J

12/01/16

RELEASED
2011-12-14



NOTES:

- 1) MATERIAL: 6061-T4/T42 ALUMINUM TUBING PER WW-T-700/6, AMS 4081, OR ASTM B210 / B221 / B241
REF DART SPEC M6061T4T0.500W.058
OR
6061-T6/T62 ALUMINUM TUBING PER WW-T-700/6, QQ-A-200/8, QQ-A-225/8, AMS 4080 / 4082, OR ASTM B210 / B221 / B241
REF DART SPEC M6061T6T0.500W.58
HEAT TREAT TO -T4/-T42 CONDITION. MIN UTS = 30 KSI (60 HREW MIN)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.03 lbs

C	6061-T4 WAS 6061-T6, 0.058 WAS 0.049	CP	11.12.13
B	0.049 WAS 0.058. REASON: FACILITATE MFG	MB	11.03.22
A	NEW ISSUE	CP	10.09.22
REV.	DESCRIPTION	BY	DATE
DESIGN	GP		
DRAWN	GP		
CHECKED	ASS		
MFG. APPR.	EF		
APPROVED	TH		
DE APPR.			
DATE	11.12.13		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4202** REV. C
SHEET 1 OF 1
TITLE **SPACER** SCALE
NTS

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NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO15999

Purchase Order Date 1/26/12

PO Print Date 1/26/12

Page Number 1 of 1

Order From :

VC-MET004

METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

Contact Name

Vendor Phone 450 473 1884

Vendor Fax 450 491 5498

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

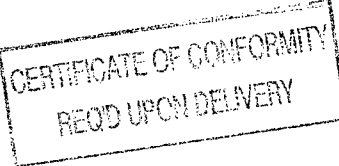
CL 12/01/12

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	78806	D4202-1 SPACER	2/08/12 Yes	514.00	FedEx Pl collect	\$1.2500	\$642.50

Special Inst: HEAT TREAT AS PER DWG D4202 REV.
C
HEAT TREAT TO T4/T42 CONDITION
MINIMUM UTS = 30 KSI (60 HREW MIN)

PO Total:

\$642.50



CL

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

Change Nbr: 1

Change Date: 1/26/12

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Recu de Livraison

Order	Shipper	Shipping Seq.
173103	1	58049

Shipped Complete

Customer **215**

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Shipped To:

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

Purchase Order Number	Customer Shipper No.	Material Type	Order Date	Carrier
PO15999		AL-6061	2012/1/27	PUROLETTER
Quantity	Part No. / Part Name / Part Description			Pounds
514	D-4202-1			17,

Container Type	# Of Containers	Container Comments
BOITE DE CARTON	1	

PACKING	
----------------	--

Quantity Shipped: 514
Pounds Shipped: 17,00
Quantity Remaining: 0
Pounds Remaining: 0,00

Quantity Shipped: 514

Pounds Shipped: 17,00

Signature:

Date:

METCOR INC.
560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC, J7R 5A8
 Tel: 450-473-1884 / Fax: 450-491-5498

Certificat de Conformité Détaillé
 Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
173103	1

CLIENT / customer 215

DART AEROSPACE
 1270 ABERDEEN
 HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE
 1270 ABERDEEN
 HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	BON DE LIVRAISON DU CLIENT customer shipper no.	MATÉRIEL material	CODE DE TRAITEMENT mat'l heat code	NUMÉRO DE LOT lot number
PO15999		AL-6061		

SPÉCIFICATIONS DU PROCÉDÉ
 processing specifications

SOL ANNEAL
 COND.W

5/17/02/05

Heat Treat T4/T42 per ASTM B221

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
Visual			

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
514	17	D-4202-1 REV. C

Operation	Temp. spécifiée Specified Temp	Temps de trempe Spécifié Specified Soak Temp	Atmosphère	Carbone Carbon Potential	Q-Media Q-Temp	Four # Furnace #	Date Départ Start Date	Heure d'entrée Time In	Heure de sortie Time Out	Date Complétée Date complete
1,00 CONT. INIT.	LAVAGE		si nécessaire							
2,00 Degrease										
3,00 PREPARING	COMPTAGE									
4,00 PREHEAT 1	529°C	0:30	air			701				
5,00 WATER TEM										
6,00 SOL ANNEAL	529°C	0:35 +/- 5 min	AIR		WATER 32MAX	701				
7,00 QUENCH DE										
8,00 QUENCH TI										

METCOR INC.
560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC, J7R 5A8
 Tel: 450-473-1884 / Fax: 450-491-5498

Certificat de Conformité Détaillé
 Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
173103	1

CLIENT / customer 215

DART AEROSPACE
 1270 ABERDEEN
 HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE
 1270 ABERDEEN
 HAWKESBURY

ON K6A 1K7

1

Operation	Temp. spécifiée Specified Temp	Temps de trempe Spécifié Specified Soak Temp	Atmosphere	Carbone Carbon Potential	Q-Media Q-Temp	Four # Furnace #	Date Départ Start Date	Heure d'entrée Time In	Heure de sortie Time Out	Date Complétée Date complete
9,00 WATER TEM										
10,00 FINAL INSP							02-02-2012			02-02-2012

COMMENTAIRES / comments

APPROUVÉ par / Approved by:

Vincent Caron



DATE: 2012-02-09

/ Nous certifions que toute l'information comprise sur ce rapport est exacte et conforme aux requis du client. / We certify that all the information on this report is exact and in accordance with the order requirements.